6. (Amended) A semiconductor device according to claim 2, wherein said barrier film is a single [monolayer] layer of elemental barium atoms on [attached to] said surface of said substrate material.

7. (Amended) A semiconductor device according to claim 2, wherein said barrier film comprises a plurality of contiguous [monolayers] layers of elemental barium atoms located on said surface of said substrate material.

21. (Amended) A semiconductor device according to claim 1, wherein said barrier film [comprise] comprises a plurality of contiguous monolayers of barium atoms located on said surface of said substrate material.

23. (Twice Amended) A semiconductor device comprising:

a semiconductor substrate;

a barrier film [comprising] comprised of elemental barium atoms having a thickness in the range of approximately 5Å to approximately [less than] 100Å on said substrate; and

a metallic material on said barrier film.

Cancel Claims 14-20 and 22.

Please add the following new claims:

-- 24. The semiconductor device according to claim 23, wherein said barrier film has a thickness in the range of approximately 5Å to approximately 20Å.

25. The semiconductor device according to claim 23, wherein said substrate comprises semiconductor silicon, and said barrier film directly contacts said substrate.

26. The semiconductor device according to claim 2, wherein said barrier film has a thickness in the range of approximately 5Å to approximately 20Å.

27. The semiconductor device according to claim 1, wherein said substrate comprises semiconductor silicon, and said barrier film directly contacts said substrate.

28. The semiconductor device according to claim 8, wherein barrier film directly contacts said substrate. --